

# WGOOFE:

## hooking up data users with data

*Barbara Berx, Mark Dickey-Collas, and Morten Skogen describe a disconnect between data producers and data users, and explain how WGOOFE is making new connections.*

In a marine science and management world that increasingly emphasizes a multidisciplinary approach, a world in which large projects often drive collaborations across the fields of oceanography, fishery management, and environmental research, many ICES scientists are under the impression that the data they need are not available. They believe that they have been left to their own devices to find environmental information that supports their research and advisory roles.

**In fact, many sources of oceanographic and environmental data are readily available.**

ICES Working Group on Operational Oceanographic Products for Fisheries and Environment (WGOOFE) was established in spring 2008 to remedy this gap in awareness. It acts as a two-way link between the producers and users of oceanographic data products, has developed a web portal for oceanographic products, and is working to establish more detailed user requirements. The working group consists of data producers (mostly scientists from meteorological or operational oceanographic backgrounds) and users from a diversity of fields (environmental, oceanographic, ecological modelling, and fisheries).

**The magic portal to oceanographic data**

The working group is particularly proud of the website created under its guidance, <http://www.wgoofe.org>, which is currently hosted by Ifremer. It acts as a data portal to various existing oceanographic data products and offers links to empirical (based on physical observations), modelled (based on a computer model or numerical simulations), and integrated (created by combining data residing in different sources) products for forecast, real-time, and time-series research.

**Scientists are under the impression that the data they need are not available**

A new development allows users to search for oceanographic data based on parameter type (e.g. temperature, salinity), rather than being limited to searching for data by region.



▲ Some members of the WGOOFE team at the Aberdeen meeting. Front left to right: R. Foster, H. Klein, E. Dombrowsky, C. Schrum, and M. Payne; back left to right: S. Legrand, Y-H. De Roeck, R. Barciela, B. Berx, M. Skogen, M. Dickey-Collas, and G. Vinay.

A second development will reward producers of easily accessible products with a prime location on the website and an endorsement indicated by a “WGOOFE traffic light” or quality label. An endorsement will alert users that data are easy to find and ready for download, and that documentation and contact information is easily obtainable. It is hoped that a rewards programme will encourage easy access to data with no broken links, up-to-date data, and will eliminate the countless hurdles encountered when searching for data.

#### More questions than answers?

Early on, the working group realized that it needed more input from the ICES community about its requirements for oceanographic data products (state variables, frequency, resolution, format, etc.). Many data were available, but how were they needed and in what formats?

Within WGOOFE, the operational data providers (group members who are affiliated with operational oceanographic institutes or organizations with large observational programmes) outnumbered users three to

one. Thus, it became clear that the wider ICES community might not be adequately represented by the users around the table. There was an additional danger that producers would drown out the views expressed by the user community. To address these problems, a questionnaire was circulated to gather user views. Events were organized in several research institutes and at ICES Annual Science Conference in support of the questionnaire.

Do you feel like your oceanographic products have been missed by the WGOOFE? Do you think WGOOFE is not covering your user needs? Would you like to contribute to one of the most prolific ICES working groups? Why not visit our website (<http://www.wgoofe.org>), contact our chairs (Mark Dickey-Collas and Morten Skogen), come to our session at the ICES Annual Science Conference (Theme Session A), or attend the upcoming WGOOFE meeting in Bergen in November?

## There was a danger that producers would drown out the views expressed by the user community

The questionnaire elicited responses from 100 marine researchers from environmental and fisheries backgrounds, and from across diverse research institutes. The scientists emphasized the need for information on temperature, transport, primary production, and salinity (see the figure opposite). Their answers also highlighted the gap between researcher requirements identified by data providers and the requirements actually described by the researchers.

For example, while the producers emphasize high-resolution, short-term forecasts, most researchers prefer time-series of annual averages of regional data. Researchers favour absolute values, whereas many producers appear more interested in providing information on the differences from the average (anomalies). Preferences about the format in which data should be provided likewise diverged, with some lobbying for ASCII files or spreadsheets, while others chose netCDF (network Common Data Form) files, which support the creation, access, and sharing of array-oriented scientific data.

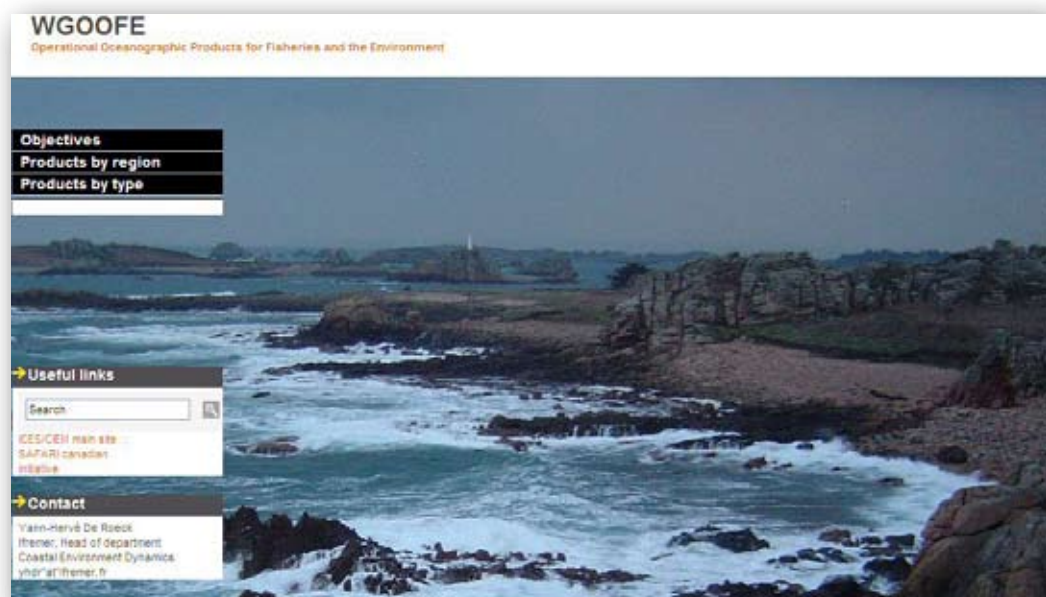
It was clear that almost all of the researchers want access to data (more than 90% of those questioned), whereas only 40% of researchers are interested in graphical presentations.

If not addressed, these diverse perceptions of what is required would slow down research and impede progress towards an integrated ecosystem approach. WGOOFE's next task is to relay this message to the producers of operational oceanographic products.

### Our autumn spectacle

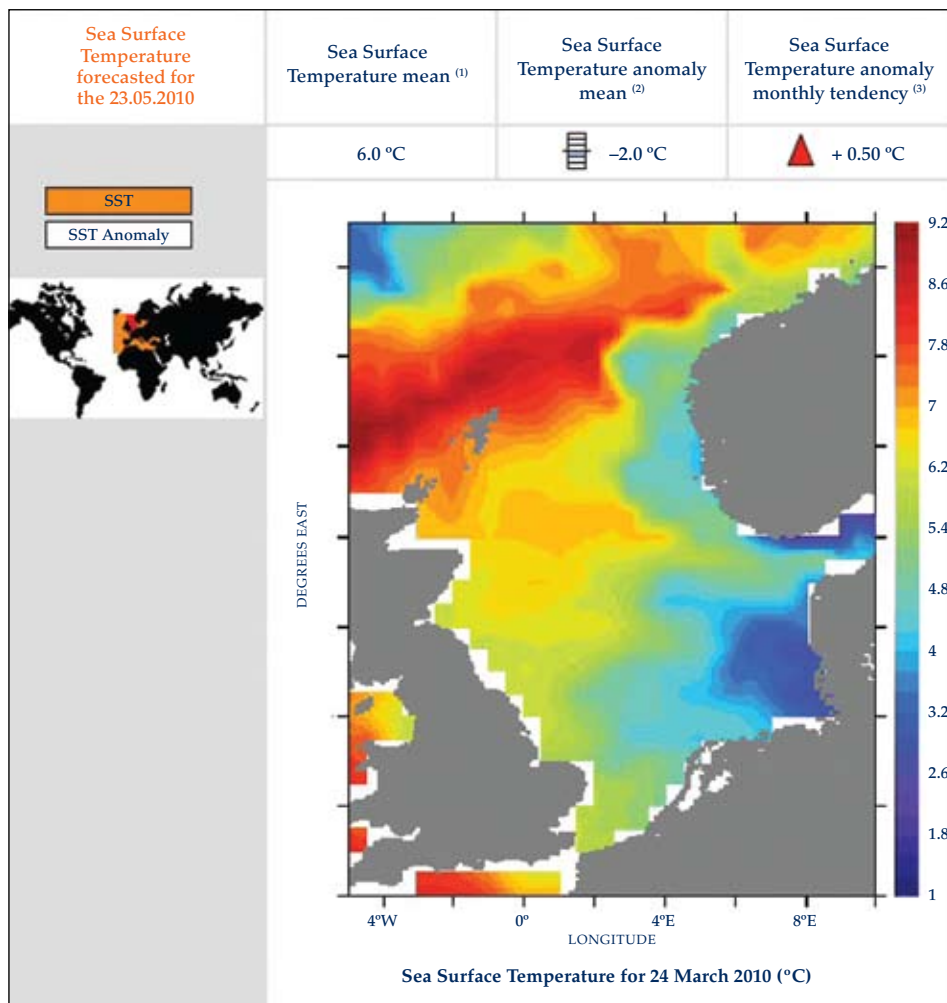
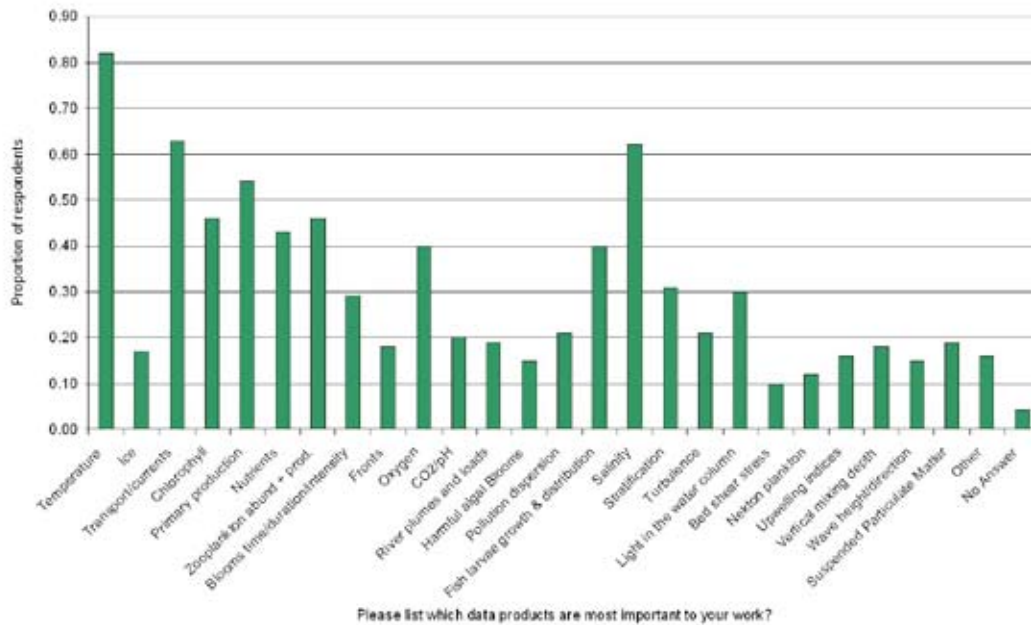
With support from many ICES expert groups (WGDIM, WGPBI, WGOH, and IGWG), WGOOFE are co-convening one of the theme sessions at the ICES Annual Science Conference 2010. At Theme Session A, "Operational oceanography for fisheries and environmental applications", participants will experience a wide variety of presentations and discussions covering both data products and their development, as well as practical applications. Sob stories about dashed (data) hopes and aspirations will be heard and considered.

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▲ The WGOOFE portal to oceanographic data products.

▼ Variables listed as important to their work by respondents to the WGOOFE survey from the ICES community.



▲ Accessed through the WGOOFE website: real-time sea surface temperature for the “Europe” region from the Mercator Ocean website.